AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-10 (cancelled)

11. (New) A communications node (N1, N3, N4) of a backed up ring optical telecommunications network, comprising:

an optical fiber section (2c, 2e, 2f) for transporting optical signals (s1, s2), and

extraction means (10, 30, 40) for extracting optical signals transported by the fiber section,

characterized in that, to allow the use of the same section of fiber in one direction (s1) when the network is in a normal transmission state and in the opposite direction (s2) when the network is in a backed up transmission state, the extraction means (10, 30, 40) are of the power coupler type and are bidirectional,

and in that it further comprises:

switching means (11, 31, 41) for directing optical signals extracted by the extraction means, and

control means (12, 32, 42) for detecting the transmission state of the network and controlling the switching means as a function of that state.

12. (New) A communications node (N1, N3, N4) according to claim 11, characterized in that it comprises an optical gate (13, 33, 43) controlled by the control means (12, 32, 42) and inserted into the fiber section (2c, 2e, 2f) to pass or eliminate optical signals.

13. (New) A communications node (N1, N3, N4) of a backed up ring optical telecommunications network, comprising:

an optical fiber section (6c, 6e, 6f) for transporting optical signals, and

insertion means (100, 300, 400) for inserting optical signals into the fiber section,

characterized in that, to allow the use of the same section of fiber in one direction (s1) when the network is in a normal transmission state and in the opposite direction (s2) when the network is in a backed up transmission state, the insertion means (100, 300, 400) are of the power coupler type and are bidirectional,

and in that it further comprises:

switching means (110, 310, 410) for directing optical signals to be inserted into the fiber section toward the insertion means, and

control means (120, 320, 420) for detecting the transmission state of the network and controlling the switching means as a function of that state.

14. (New) An amplified communications node (N2, N5) of a backed up ring optical telecommunications network, comprising:

at least one optical fiber section (2d, 6d, 2g, 6g) for transporting optical signals, and

amplifier means (24, 240, 54, 540) for each fiber section inserted into the associated fiber section to amplify optical signals,

characterized in that, to allow the use of the same section of fiber in one direction (s1) when the network is in a normal transmission state and in the opposite direction (s2) when the network is in a backed up transmission state, it further comprises:

switching means (21, 210, 51, 510) for each fiber section, inserted into the associated fiber section, for directing optical signals toward the associated amplifier means, and

control means (22, 220, 52, 520) for detecting the transmission state of the network and controlling the switching means as a function of that state.

15. (New) An amplified communications node (N2, N5) according to claim 14, characterized in that it comprises power coupler type extraction means (20, 50) for extracting downlink optical signals transported by the fiber section of the network (2d, 2g) dedicated to transporting downlink signals.

16. (New)An amplified communications node according to claim 14, characterized in that it comprises power coupler type insertion means (200, 500) for inserting uplink optical signals into the fiber section of the network (6d, 6g) dedicated to transporting uplink signals.

17. (New) A traffic concentrator (H1, H2) of a backed up ring optical telecommunications network, characterized in that, to allow the same section of fiber to be used in one direction (s1) when the network is in a normal transmission state and in the opposite direction (s2) when the network is in a standby transmission state, it comprises:

two separate sections of a first optical fiber (2a, 2b, 2a', 2b'),

switching means (110A to 112B) connected to one end of each of the sections of the first fiber to inject into these two ends substantially identical optical signals addressed to nodes of the network,

switching means (600) connected to one end of each of the sections of the second fiber to receive via one of those two ends an optical signal sent by a node of the network, and

control means for detecting the transmission state of the network and controlling the switching means as a function of that state.

18. (New) A traffic concentrator (H1) according to claim 17, characterized in that the switching means (110A to 112B) comprise optical switches operating two by two.

19. (New)A traffic concentrator (H2) according to claim 17, characterized in that the switching means (600) comprise three-state optical switches forming a quadripole A, B, C, D and allowing optical signals to propagate between the four poles in any of the following three propagation modes:

between the poles A and B, on the one hand, and between the poles C and D, on the other hand, corresponding to a direct propagation mode;

between the poles A and C, on the one hand, and between the poles B and D, on the other hand, corresponding to a crossed propagation mode;

between the poles A and D, on the one hand, and between the poles B and C, on the other hand, corresponding to a transparent propagation mode.